



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,878	01/09/2002	Samya Boxberger-Obero	51410/P028US/10107146	6277
27517	7590	07/13/2005	EXAMINER	
FULBRIGHT & JAWORSKI L.L.P. 2200 ROSS AVENUE SUITE 2800 DALLAS, TX 75201			PIERRE, MYRIAM	
			ART UNIT	PAPER NUMBER
			2654	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/043,878	Applicant(s) BOXBERGER-OBEROI ET AL.	
	Examiner Myriam Pierre	Art Unit 2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### **Response to Amendment**

1. Applicant's Amendment filed 04/04/2005, responding to the OA of 10/043,878, amended specification, amended claims 1, 10, and 12, removal of 112 2<sup>nd</sup> claim 10 rejection.

### **Response to Arguments**

2. Applicant argues as follows below:

A. Rejections over Hyde-Thomson (6,487,533), herein referred to as Hyde:

As to claims 1 and 7, Applicant argues that examiner mistakenly asserts that Hyde teaches a set of local-specific rules, however, examiner asserts that Hyde teach automatic language identification which inherently is local-specific in rules in order to identify languages, the prior art uses statistics as a rule base for interpreting languages "language identification based upon the statistical occurrences of three-letter combinations" col. 5 lines 64-65 and col. 1 line 57. Applicant argues that language identification, as taught by Hyde does not teach a locale-specific rule, as required by claims 1 and 7, however, examiner interprets language identification as inherently encompassing locale-language, thus Hyde teaches local-specific rules.

IX. Claim rejection under 35 U.S.C. 103

Applicant argues that the references, taken alone or in combination, do not teach or suggest all of the claimed limitations. Examiner did not apply a 103 rejection to

Art Unit: 2654

claims 1 or 7. Examiner asserts that Hyde teaches all of the limitations for claims 1 and 7.

As to claim 1, Hyde teach

a text-to-speech engine (Fig. 2, elements 245, 242-4) that receives text-based information (Fig. 3, step 300) and converts the text-based information to spoken words (Fig. 3, step 316); and

a set of locale-specific rules (language identification) that define how certain text-based information should be interpreted ("...language identification based upon the statistical occurrences of three-letter combinations", col. 5, lines 64-65. Language identification is based on rules such as statistical occurrences) in the text-to-speech (col. 6, line 2), wherein set of locale-specific rules include text (text-to-text conversion, col. 7, line 48-49. Textual language identification is performed for text-to-text as well) interpretation rules (rule based, col. 1, line 57) for a plurality of languages (language which user is most comfortable with, col. 7, lines 51-52).

As to claim 7, Hyde teach

identifying (language identification) a selected locale (language) to be used when converting (conversion, col. 7, line 48) text to speech (text to speech conversion, language preference selections for subscriber, col. 7, lines 41-42, 53-54);

identifying (language identification) one or more elements (characters) in text (textual input comprises of characters, col. 6, line 9) that should be interpreted using locale-specific rules (implied by language identifier, col. 7, line 47).

A. Rejections over Hyde in view of August:

Applicant argues that Hyde does not teach or suggest locale-specific rules. However, examiner asserts that Hyde teach automatic language identification which inherently is local-specific in rules in order to identify languages, the prior art uses statistics as a rule base for interpreting languages "language identification based upon the statistical occurrences of three-letter combinations" col. 5 lines 64-65 and col. 1 line 57.

Applicant argues that August does not teach or suggest every element in claim 6, however, examiner refers to page 7 paragraph 81, wherein August teaches sub-words, as when implementing sound drills, of two languages mapped together, hence using common rules, in order to illustrate sound alike comparison. Moreover, page 4 paragraph 54, August et al. teach "inflections and tonal variations common to language (thus implying locale-language) in context are included in the system".

B. Rejection over Hyde in view of Hon

Applicant argues that Hyde does not teach or suggest locale-specific rules. However, examiner asserts that Hyde teach automatic language identification which inherently is local-specific in rules in order to identify languages, the prior art uses statistics as a rule base for interpreting languages "language identification based upon the statistical occurrences of three-letter combinations" col. 5 lines 64-65 and col. 1 line 57.

Regarding claim 7, applicant argues that Hon does not teach or suggest a set of locale specific rules, however, in regards to claim 7, the examiner never points to Hon, so it is a moot point.

Regarding claim 8, applicant argues that Hon does not teach or suggest every element of claim 8, however, claim 8 is a 103 rejection in which Hyde in view of Hon teaches the limitation of claim 8, group of elements, see page 3 paragraph 33, page 6 paragraphs 33, 52 and 55. Hyde's text-to-speech system with Hon's textual elements provide flexibility in the speech synthesizer's ability to recognize various elements within a text for proper pronunciation of various elements, as taught by Hon, page 1 paragraphs 4 and 9.

As to claim 27, applicant argues that Hyde does not teach locale-specific rules, however, Hyde teach automatic language identification which inherently is local-specific in rules in order to identify languages, the prior art uses statistics as a rule base for interpreting languages "language identification based upon the statistical occurrences of three-letter combinations" col. 5 lines 64-65 and col. 1 line 57.

Applicant argues that Hon does not teach locale specific rules, however, examiner cites Hyde for teaching locale rules, the OA does not point to Hon in claim 27, therefore it is a moot point.

#### C. Rejections over Hyde in view of Hon in further view of Flach

Regarding claim 7, applicant argues that Hyde does not teach locale-specific rules, however, Hyde teach automatic language identification which inherently is local-

Art Unit: 2654

specific in rules in order to identify languages, the prior art uses statistics as a rule base for interpreting languages "language identification based upon the statistical occurrences of three-letter combinations" col. 5 lines 64-65 and col. 1 line 57.

Applicant argues that the combination of Hyde, Hon and Flach do not teach claims 9, 11 and 12; however, examiner respectfully disagrees. Hyde teaches locale rules inherent to language identification, Hon teaches identifying numbers in text in order to interpret expanding and monetary numbers, thus providing further analysis of the text for the best-preselected phoneme-based system, as taught by Hon, page 3 paragraph 33 and page 4 paragraph 36. As to claims 11-12, Flach teaches cases (page 1293, paragraph 1) and teach gender (page 1293 left column paragraph 1; gender are necessarily a type of element) for easy implementation of knowledge bases to further languages in the framework of a multilingual speech synthesis system, as taught by Flach, page 1293 paragraph 1 and Abstract.

D. Rejections over Hyde in view of Hon and Flach, and in further view of Malsheen

Claim 7 is rejected under Hyde, not Hon Flach and Malsheen, so, applicant's argument that Hon, Flach nor Malsheen teach or suggest claim 7 is moot.

E. Rejections over Hyde in view of Malsheen and in further view of Flach

As to claims 13 and 19, applicant argues that Hyde does not teach or suggest a set of locale-specific rules, however, Hyde teach automatic language identification

Art Unit: 2654

which inherently is local-specific in rules in order to identify languages, the prior art uses statistics as a rule base for interpreting languages "language identification based upon the statistical occurrences of three-letter combinations" col. 5 lines 64-65 and col. 1 line 57.

Applicant argues that neither Malsheen nor Flach teach or suggest this limitation, however, examiner cites Malsheen and Flach for identifying and classifying numbers/digits (Malsheen col. 7 line 62) and accessing locale rules for digits (Flach page 1293 left column paragraph 3) in order to properly convert text to spoken words, as taught by Malsheen, col. 2 line 55 and to convert digits to speech for ease and minimal effort in translations, as taught by Flach, page 1293 paragraph 1, respectfully.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-5, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Hyde-Thomson (6,487,533).

As to claim 1, Hyde-Thomson teaches



a text-to-speech engine (Fig. 2, elements 245, 242-4) that receives text-based information (Fig. 3, step 300) and converts the text-based information to spoken words (Fig. 3, step 316); and

a set of locale-specific rules (language identification) that define how certain text-based information should be interpreted ("...language identification based upon the statistical occurrences of three-letter combinations", col. 5, lines 64-65. Language identification is based on rules such as statistical occurrences) in the text-to-speech (col. 6, line 2), wherein set of locale-specific rules include text (text-to-text conversion, col. 7, line 48-49. Textual language identification is performed for text-to-text as well) interpretation rules (rule based, col. 1, line 57) for a plurality of languages (language which user is most comfortable with, col. 7, lines 51-52).

As to claim 2, Hyde-Thomson teaches,

a text message (textual input, col. 6, line 7) storage device (memory, element 210, Fig. 2) for storing a plurality of text messages (store messages, col. 5, line 2), wherein text messages may be transmitted (electronic mail, col. 4, line 1) to the text-speech engine (Fig. 2, elements 242-244) for conversion to a corresponding audio message (translate audio information by text-to-speech engine, col. 1, lines 44-45).

As to claim 3, Hyde-Thomson teaches,

A processor (processing unit, col. 4, lines 66-67) to be used for conversion of a text-based information (text-to-text conversion, col. 7, line 48-49. The processing unit

Art Unit: 2654

works with the trigraph analyzer which performs text based conversions or translations) for identifying a desired locale (language identifier, col. 6, line 4 and col. 5, lines 51, 56-58. The language identifier is an n-character statistical model used to automatically derive the desired language from memory.).

As to claim 4, Hyde-Thomson teaches,  
desired locale (language) corresponding to a locale (language) identified by user (subscriber) who will receive converted text-based information (text, language which the subscriber is most comfortable, col. 7, lines 47-48 and 51-52).

As to claim 5 Hyde-Thomson teaches,  
locale (language) corresponds to a locale (language) that is associated with the text-based information that is to be converted (text-to-text language translation, col. 48-49).

As to claim 7, Hyde-Thomson teaches,  
identifying (language identification) a selected locale (language) to be used when converting (conversion, col. 7, line 48) text to speech (text to speech conversion, language preference selections for subscriber, col. 7, lines 41-42, 53-54);  
identifying (language identification) one or more elements (characters) in text (textual input comprises of characters, col. 6, line 9) that should be interpreted using locale-specific rules (implied by language identifier, col. 7, line 47).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533) in view of August et al. (2003/0028378).

As to claim 6 Hyde-Thomson teaches,

A set of locale-specific (language) rules is organized in a hierarchical manner (n-gram language identification, col. 5, line 52) in which text interpreted rules (text samples... rule-based, col. 5 line 39, & col. 1, line 57).

Hyde-Thomson does not explicitly teach lower and higher hierarchy.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use a rule based language that grouped text in lower and higher hierarchy that classifies text for adding or combining common concepts for organizing common characters according to rules in order for quicker processing.

Hyde-Thomson does not explicitly teach rules that are common to two or more locales (languages).

However, August teaches of using rules (page 7, paragraph 4) that are common to two locales (languages) (sub-words of two languages mapped together, hence

using common rules for two languages, page 7, paragraph 0081).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Hyde-Thomson's locale-specific rules that incorporates August's common language rules in order for the speech synthesizer "to illustrate sound alike comparison", as taught by August, page 7, paragraph 81.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533), further in view of Hon (2001/0044724).

As to claim 8, Hyde-Thomson does not teach the group of elements that is cited.

However, Hon teaches, TTS from

numbers (page 3, paragraph 33);

characters (page 6, paragraph 55);

symbols (page 6, paragraph 52, alphabetical form is necessarily symbols);

abbreviations (page 3, paragraph 33); and

punctuation marks (page 3, paragraph 32).

At the time of the invention, it would have been obvious to use Hyde-Thomson's text-to-speech system with Hon's textual elements in order to provide flexibility in the speech synthesizer's ability to recognize various elements within a text for proper enunciations of various elements used in proofreading for grammatical and punctuation errors, as taught by Hon, page 1, paragraphs 4 and 9.

Art Unit: 2654

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533) in view of Hon (2001/0044724).

As to claim 9, Hyde-Thomson does not teach identifying numbers or determining number types.

However, Hon teaches identifying numbers in text (text...expanding numbers, page 3, paragraph 33). Also, Hon teaches determining the number type of said one or more numbers (expanding numbers and monetary amounts, page 3, paragraph 33).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Hyde-Thomson's text-to-speech system with Hon's method of identifying the type of numerals in a text, for flexibility, because this would provide further analysis of the text for the best pre-selected phoneme-based system (the text analyzer uses a text-to-speech converter that concatenates the best pre-selected phoneme, as taught by Hon, page 3, paragraph 33 and page 4, paragraph 36).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533) in view of Hon (2001/0044724), as applied to claim 9, in further view of Johnson et al. (6,633,848).

As to claim 10, Hyde-Thomson and Hon teach the limitations in claim 9.

Neither Hyde-Thomson nor Hon teach the specific number types listed below.

However, Johnson et al. teach

time (col. 49 line 37);

date (col. 13 line 41);

key number (Fig. 8 element 165);  
duration number (col. 33-34, Table 1, "number of times" is a duration number);  
address number (park address, col. 20 line 50; parking address necessarily has address number);  
counting number (col. 33-34, Table 1, "number of times" is a duration number which is used as a counting number).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Hyde-Thomson in view of Hon method text to speech with specific number type data structure for flexibility, thus providing language support for systems by way of data structure, so that additional language support may be readily implemented via a non-software coder using grammar and voice prompt files implemented in language capacity systems, as taught by Johnson et al., col. 4 lines 52-59.

8. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533) as applied to claim 7, in view of Flach et al. (Automatic Learning of Numerical Grammars for Multi-lingual Speech Synthesis IEEE-00).

As to claim 11,

Hyde-Thomson teach all of the limitations of claim 7, but does not teach determining cases of elements for TTS.

However, Flach teaches case (page 1293, left column, 1<sup>st</sup> paragraph).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Flach, such determining case sensitivity, in the method of Hyde-Thomson in view of Hon, for easy implementation of knowledge bases to further languages in the framework of a multilingual speech synthesis system, as taught by Flach, page 1293, left column, 1<sup>st</sup> paragraph and Abstract.

As to claim 12,

Hyde-Thomson teach all of the limitations of claim 7, but does not teach determining proper gender of elements for TTS.

However, Flach teaches gender (page 1293, left column, 1<sup>st</sup> paragraph; gender are necessarily a type of element).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Flach, such determining the gender, in the method of Hyde-Thomson in view of Hon, for easy implementation of knowledge bases to further languages in the framework of a multilingual speech synthesis system, as taught by Flach, page 1293, left column, 1<sup>st</sup> paragraph and Abstract.

9. Claims 13-26 and 29 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Hyde-Thomson et al. (6,87,533) in view of Malsheen et al. (5,634,084), and in further view of Flach et al. (IEEE ICASP 2000).

Art Unit: 2654

As to claims 13 and 19, Hyde-Thomson teaches  
component part (audio) of a system prompt that is played for a caller (caller can remotely listen to message or at computer... audio information by a TTS engine, col. 2, lines 3-7, 11-13 & col. 1, line 44);

component parts (audio) are to be concatenated to form the system prompt (message inquiry unit playback, voice message, col. 2, line 64-67); and

a selected locale (language) that is associated with the text file (electronic mail, text to speech conversion for various language, col. 4, line 1 and col. 5, lines 21-22);  
and

a set of locale-specific rules (implied by language identifier, col. 7, line 47).

Hyde-Thomson does not explicitly teach identifying and classifying numbers/digits.

However, Malsheen teaches

digits (col. 7, line 55) in the text file (email, col. 4, line 63) that is being converted to speech (passes result to TTS converter, col. 7, line 62); and identifying the digits as a time, date, or number (determines the time, date or type of number, col. 7, lines 46-47. The Number expander determines the different number types, the process is a type of classification or sorting of different kinds of numbers).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify and classify digits having locale-specific rules in order to properly convert text to spoken words, as taught by Malsheen, col. 2, line 55.



Hyde-Thomson does not teach determining selected locale (language) associated with the caller.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the language of the caller for the system prompt, thus providing user-friendliness in the system by using the corresponding language of the caller/speaker.

Hyde-Thomson does not teach accessing locale rules for digits.

However, Flach teaches using locale rules (6 languages) to determine how to convert the digits (numbers) to speech (page 1291, left column 3<sup>rd</sup> paragraph).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use locale rules for converting digits to speech in order for ease and minimal effort in translations, as taught by Flach, page 1292 left column 1<sup>st</sup> paragraph.

As to claim 14 and 20, Neither Hyde-Thomson nor Malsheen nor Flach teach classifying a time as a 12-hour time format or a 24-hour time format.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to classify time in military or standard formats in order for the synthesizer to properly specifying the time of day in digit format, or a.m., p.m., because this enables the TTS system to interpret responses from the text that are in various formats.

As to claim 15 and 21, Hyde-Thomson does not teach identifying date formats.  
However, Malsheen teaches

a date format (col. 7, line 49) for digits (col. 7, line 55).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use Hyde-Thomson's TTS language identifier that utilizes date format for flexibility in the synthesizer, thus the date format is appropriate for the corresponding text language.

As to claim 16 and 22, Neither Hyde-Thomson nor Malsheen teach number format for digits.

However, Flach teaches

a number format for the digits (digit..formats, page 1293 left column 1<sup>st</sup> paragraph).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to Hyde-Thomson's speech synthesizer that reads number formats for digits in order for flexibility in the context-correction conversion of number sequences, which includes special kinds of formats, as taught by Flach, page 1293, left column, 1<sup>st</sup> paragraph.

As to claim 17 and 23 Neither Hyde-Thomson nor Malsheen teach identifying case.

However, Flach teaches

a case for digits (digits...case, page 1293 left column 1<sup>st</sup> paragraph) before the digits are converted to speech (text preprocessor of TTS system, (page 1293 left column 1<sup>st</sup> paragraph. Text preprocessor would identify the case for digits before applying it to the TTS system).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify case for digits for flexibility in the context-correction conversion of number sequences, which includes identifying case format, as taught by Flach, page 1293, left column, 1<sup>st</sup> paragraph.

As to claim 18 and 24, Neither Hyde-Thomson nor Malsheen teach identifying gender.

However, Flach teaches  
a gender for the digits (digits...gender, page 1293 left column 1<sup>st</sup> paragraph)  
before the digits are converted to speech (page 1293 left column 1<sup>st</sup> paragraph. Text preprocessor would identify the gender for digits before applying it to the TTS system).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify gender for flexibility in the context-correction conversion of number sequences, which includes identifying gender format, as taught by Flach, page 1293, left column, 1<sup>st</sup> paragraph.

As to claim 25 Hyde-Thomson teaches  
prerecorded audio messages (prerecorded message, Fig. 3 element 318).

As to claim 26 Neither Hyde-Thomson nor Malsheen nor Flach explicitly teach digital files having a WAV format or an MP3 format.

At the time of the invention, it would have been obvious to one of ordinary skill in the art for the digital files to have .WAV or MP3 formatting streaming audio server to support these well known static file formats for use in a readily available media player.

As to claim 29, Hyde-Thomson teaches

Locale-specific date rules (implied by textual language identification, col. 5, line 39-40).

Hyde-Thomson does not teach converting dates to speech.

Malsheen teaches

to convert date to speech (determines the time, date or type of number, text-to-speech converter, col. 7, lines 46-47 & line 62).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify and classify digits having locale-specific rules in order to properly convert text to spoken words, as taught by Malsheen, col. 2, line 55.

10. Claims 27-28, and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde-Thomson (6,487,533) in view of Flach et al. (Automatic Learning of Numerical Grammars for Multi-lingual Speech Synthesis IEEE-00).

As to claim 27, Hyde-Thomson teaches

a selected locale (language) to be used in converting text to speech (language. Identification... conversion of textual messages into speech... electronic mail, col. 2, lines 40-42 and 47);

one or more numbers in a text file (electronic mail) that is being converted to speech (electronic mail, text to speech conversion for various language, col. 4, line 1 and col. 5, lines 21-22); and

a set of locale-specific rules (n-gram for textual language identification, col. 5, line 39-40) associated with the selected locale (language)(selects TTS engine 242-46.. engines 242-244 correspond to various languages in memory, col. 7, lines 14-15 and col. 5, lines 21-22).

Hyde-Thomson teaches

in the text file (electronic mail) to speech using locale-specific (language) rules (n-gram for textual language identification, col. 5, line 39-40).

Hyde-Thomson does not explicitly teach converting numbers.

However, Flach teaches

converting the one or more numbers (sequence of numbers, tens, digits, and hundreds, page 1291, right columns, 1<sup>st</sup> paragraph).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to convert one or more numbers using language rules in order for flexibility in the synthesizer reading numbers because numbers can occur in several grammatical contexts, as taught by Flach, page 1293, left column, 1<sup>st</sup> paragraph.

Art Unit: 2654

As to claim 28,

Neither Hyde-Thomson nor Flach teach

classifying a time as a 12-hour time format or a 24-hour time format.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to classify time in military or standard formats in order for the synthesizer to properly specifying the time of day in digit format, or a.m., p.m., because this enables the TTS system to interpret responses from the text that are in various formats.

Hyde-Thomson teaches locale-specific rules (implied by textual language identification, col. 5, line 39-40).

However, Hyde-Thomson does not teach converting time to speech.

Flach teaches converting time to speech (speech synthesis ...clock time, page 1291, left column, 2<sup>nd</sup> paragraph).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use a speech synthesizer to convert time to speech in order flexibility in the synthesizer detecting and transforming the various formats of numbers into sound that is familiar to the listener, as taught by Flach, page 1203, left column, 1<sup>st</sup> paragraph.

As to claim 30, Hyde-Thomson does not teach determining case.

However, Flach teaches

Proper case (case, page 1293 left column 1<sup>st</sup> paragraph) to be used for numbers (digits) when numbers (digits) are converted to speech (page 1293 left column 1<sup>st</sup> paragraph. Text preprocessor would identify the case for digits before applying it to the TTS system).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify case for digits for flexibility in the context-correction conversion of number sequences, which includes identifying case format, as taught by Flach, page 1293, left column, 1<sup>st</sup> paragraph.

As to claim 31, Hyde-Thomson does not teach determining gender.

However, Flach teaches

Proper gender (gender, page 1293 left column 1<sup>st</sup> paragraph) to be used for numbers (digits) when numbers (digits are converted to speech (page 1293 left column 1<sup>st</sup> paragraph. Text preprocessor would identify the gender for digits before applying it to the TTS system).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to identify gender for flexibility in the context-correction conversion of number sequences, which includes identifying gender format, as taught by Flach, page 1293, left column, 1<sup>st</sup> paragraph.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Myriam Pierre whose telephone number is 571-272-7611. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

06/24/2005

  
RICHEMOND DORVIL  
SUPERVISORY PATENT EXAMINER